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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,411	06/30/2003	Byung-sun Choi	Q73220	8067
23373	7590	02/06/2008	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			VO, TUNG T	
		ART UNIT	PAPER NUMBER	
		2621		
		MAIL DATE	DELIVERY MODE	
		02/06/2008	PAPER	

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

MAILED

Application Number: 10/608,411

FEB 06 2008

Filing Date: June 30, 2003

Appellant(s): CHOI, BYUNG-SUN

Technology Center 2600

Seok-Won Staurt Lee, Reg. No. 61,124
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/26/2007 appealing from the Office action mailed 04/24/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 6,915,018

Tajime

07-2005

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
1. Claims 1, 3, 7, 9-10, 12-13, 17-18, 22-23, 26-27, 29-30, and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tajime (US 6,915,018)

Re claims 1, 9, 12, 17, 22, 29, 32-34, Tajime discloses a transcoding apparatus (figs. 1 and 10) comprising: a video decoding unit (11 of fig. 1) which receives compressed bitstream and performs decoding thereof to output decoded pictures; a complexity estimation unit (101 of fig. 1) which estimates complexity of a current picture among the decoded pictures to encode the current picture; a target bit-allocation unit (102 and 104 of fig. 1) which performs desired bit-allocation using the complexity information of the current picture; a bit-rate control unit (104 of fig. 1) which controls bit-rate using bit-allocation information (102 of fig. 1) and state information from memory, which outputs an encoded bitstream (13 of fig. 1); and a video encoding unit (13 of fig. 1) which encodes the decoded pictures on the basis of the bit- allocation and state information of the bit-rate control unit.

wherein the complexity estimation unit (101 of fig. 1) calculates complexity of a picture to be currently encoded, using complexity of decoded previous and current pictures output from the video decoding unit (11 of fig. 1, Note I, P, B pictures of MPEG).

Tajime further teaches the same complexity estimation unit (101 of fig. 2) calculates complexity of an encoded previous picture output from the video encoding unit (col. 10, lines 23-33).

Since the complexity estimation unit (101 of figs. 1 and 2) calculates the complexity of the decoded pictures (11 of fig. 1) and the complexity of the encoded picture (13 of fig. 2), it would have been obvious to one of ordinary skill in the art to combine the teachings of figures 1 and 2 of Tajime together in order to improve the complexity measurement. Doing would provide a compressed moving picture re-encoding apparatus and a compressed moving picture re-encoding method that realize shortening of the processing delay, improvement of the picture quality, and improvement of the encoding efficiency, when compressed moving picture re-encoding is performed.

Re claim 3, 10, 13, 18, 23, 30, Tajime further teaches wherein the compressed bitstream input to the video decoding unit is compressed in MPEG (Motion Picture Experts Group) format (col. 1).

Re claims 7 and 27, Tajime further teaches wherein the target bit-allocation unit (104 of fig. 1) calculates a number of bits to be allocated for the current picture using the complexity of the current picture (col. 8, lines 39-44).

2. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tajime (US 6,915,018) in view of Kim (2002/0126752).

Re claim 2, Tajime does not particularly disclose an output buffer which stores and outputs pictures encoded by the video encoding unit, wherein state information of the output buffer is provided to the bit-rate control unit as claimed.

However, Kim teaches the well known output buffer which stores and outputs pictures encoded by the video encoding unit, wherein state information of the output buffer is provided to the bit-rate control unit (40 of fig. 3).

Therefore, taking the teachings of Tajime and Kim as a whole, it would have been obvious to one of ordinary skill in the art to modify the output buffer (40 of fig. 3) of Kim into the transcoding system of Tajime for the same purpose of buffering the encoded video stream to the target bit rate controller and transmitting the encoded video stream storage or the further processing. Doing so would allow the system control overflow and underflow encoded data during encoding.

(10) Response to Argument

The appellant argues that Tajime does not particularly teach the complexity estimation unit calculates complexity of a picture to be currently encoded, using complexity of decoded previous and current pictures output from the video decoding unit and complexity of an encoded previous picture output from the video encoding unit, pages 12-16 of the appeal brief.

The examiner respectfully disagrees with the applicant. It is submitted that Tajime discloses the complexity measure computing means (101 of figs. 1 and 2), wherein the complexity measure computing means (101 of fig. 1) is to compute complexity of a picture to be currently encoded (col. 8, lines 11-14, all pictures for which encoding was performed are

computed, this would fairly suggest the complexity of a picture to be currently encoded is computed), using the decoded pictures output from the decoding path section (11 of fig. 1; the output of the decoding (de-encoding) (11) is supplied to the complexity measure computing means (101), this would obviously suggest that complexity measure computing means for computing the decoded pictures, all pictures, that includes decoded previous and current pictures).

Tajime further teaches the same complexity measure computing means (101 of fig. 1) used in the transcoding (fig. 2) for the same purpose of computing the complexity of the encoded previous picture from the encoding path section (13 of fig. 2; col. 10, lines 23-33).

Since the Tajime teaches the same complexity measure computing means (101 of figs. and 2) for computing the decoded pictures from the de-encoding path section (11 of fig.1) and the encoded previous picture from the encoding path section (13 of fig. 2). Therefore, one skill in the art would obvious use the complexity measure computing means in the combined the embodiments of figures 1 and 2 of Tajime together for the purposes of achieving high-speed processing and improved picture quality, the compressed moving picture re-encoding apparatus re-uses the encoding information de-encoded by the variable length decoder as a encoding parameter when performing re-encoding. In conclusion, the claimed features are unpatentable over Tajime.

It is noted that Not only the specific teachings of a reference but also reasonable inferences which the artisan would have logically drawn therefrom may be properly evaluated in formulating a rejection. In re Preda, 401 F.2d 825, 159 USPQ 342 (CCPA 1968) and In re Shepard, 319 F.2d 194, 138 USPQ 148 (CCPA 1963). Skill in the art is presumed. In re Sovish, 769 F.2d 738, 226 USPQ

771 (Fed. Cir. 1985). Furthermore, artisans must be presumed to know something about the art apart from what the references disclose. In re Jacoby, 309 F.2d 513, 135 USPQ 317 (CCPA 1962). The obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference. In re Bozek, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969)). Every reference relies to some extent on knowledge of persons skilled in the art to complement that which is disclosed therein. In re Bode, 550 F.2d 656, 193 USPQ 12 (CCPA 1977).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Tung Vo


PRIMARY EXAMINER

Conferees:

Mehrdad Dastouri


MEHRDAD DASTOURI
SUPERVISORY PATENT EXAMINER
TC 2600

Thai Tran


THAI Q. TRAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600